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IN AMERICA

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NO. 15.



A Convention Rhyme has come to us just in time for the North American meeting this week. Here it is:

Another year has passed away
Since we each other met—
A year of changes to us all—
But we are happy yet.

Though many friends have Homeward gone,
Have ceased this earthly strife—
Still we rejoice that we are blest
With health and peaceful life.

O may the future ever hold
For all abundant store;
And may we often meet again—
At last, to part no more!

The Progressive Bee-Keeper will "fill out the unexpired subscriptions of Success in Bee-Culture," which expired recently, as it proved to be a "success" only in name.

Grimshaw's "Apifuge," which is still used in England to prevent stings and bites of insects, doesn't suit the Canadians very well. Bro. Holtermann says that "careful manipulation, a good strain of bees, straight combs, and properly made hives, will do much to prevent stings from bees."

Father Langstroth was visited recently by Bro. A. I. Root, who "was rejoiced to find him feeling so well." Bro. Root says that Mrs. Cowan—Father L.'s daughter—with whom he lives, "has a beautiful family of seven children—four boys and three girls." Also, that "the father of this little flock was called away some two years ago, and now the charge—at least the greater part of it—of looking after the seven children and the aged father, falls on Mrs. Cowan;" and that he "never saw a more beautiful household." Surely, all who read this will be delighted to hear these good things about Mrs. Cowan and Father Langstroth.

"Bee-keeping in Ontario, and Its Development," was clearly explained and fully illustrated in the Toronto, Ont., *Globe* recently. We are inclined to think that Editor Holtermann had a hand in it all, and we don't blame him a bit, for it's well done, and should help to advertise the bee-business wonderfully in Canada. If more of such work were done, we believe it would aid greatly in creating a more general demand for honey.

Why Not Do It?—Brother Leahy of the *Progressive Bee-Keeper*, suggests that those who are so fortunate as to possess "Heaven's best blessing"—a wife—bring them along to the convention at St. Joseph this week. Certainly, it's just the thing to do, if you possibly can arrange it. We haven't forgotten the splendid attendance of comely women at the Columbian meeting, and should be pleased to see as many, or more, at St. Joseph.

Here's a Good One.—In an essay read before a certain Farmers' Institute not 500 miles from Chicago, were these words:

As Rev. E. T. Abbott, of England, has it, "Apis is Latin for bee, and an apiary is where bees, and not apes, are kept."

We have thought for some time that Rev. E. T. Abbott was the present President of the North American Bee-Keepers' Association; and also that he lives in St. Joseph, Mo., not in England! The "ape-y" part of the quotation sounds more natural, but you can't prove it by us. May be he did say it.

The St. Joseph Convention will be in session while most of our readers are perusing these pages. Next week we hope to be able to tell something about the meeting, that may interest those who were unable to attend. Then the following week we expect to begin publishing the proceedings in full, as we have employed an expert to report the convention specially for the AMERICAN BEE JOURNAL. W. Z. Hutchinson is the man who will "take down" the "doings" in a short-hand way, and then, after the convention is over, write it all out so the rest of us can read it in the BEE JOURNAL.

You May Be Surprised to receive this number of the AMERICAN BEE JOURNAL earlier than usual, but it is on account of our going to St. Joseph, Mo., this week to attend the North American bee-convention. If your next week's copy of the BEE JOURNAL is late, you will have to blame that same convention for it. It has required some hard work for us to arrange matters in our office so as to get away for nearly a whole week, but we have succeeded in doing it, and now expect to have a delightful time with the members of the North American at the St. Joseph meeting. All our correspondence will have to be neglected for about a week, when we expect to be again at the "old stand," and with our accustomed promptness.

Rev. Wm. F. Clarke, of Guelph, Ont., Canada, called on us last week. He was visiting friends and relatives in Chicago. Most of our readers know that Mr. Clarke, over 20 years ago, was editor of the

AMERICAN BEE JOURNAL, having removed it from Washington, D. C., to Chicago, where it has been published ever since. In 1873 he sold his interest to Mr. Thomas G. Newman, who edited and published it until June 1, 1892, when the present proprietors assumed full control of the destinies of the old AMERICAN BEE JOURNAL. Mr. Newman's financial interest in it ceased when it passed into our hands, though we find that the mistaken idea is still abroad, that he is yet closely connected with its management.

Mr. Newman continued in the bee-supply business in Chicago, and publishes the monthly *Illustrated Home Journal*. He is also the General Manager of the National Bee-Keepers' Union, which has done so much in defending bee-keepers against unjust and malicious persecution.

Twenty-One Tons of Honey.—Mr. Thos. B. Blair, of Neenah, Wis., sent us the following item that he had clipped from a local newspaper, and whose truthfulness he was inclined to doubt:

Mrs. W. J. Pickard, of Richland Centre, Wis., shipped to New York a carload of honey weighing 36,000 pounds. Her entire product this year was 42,000 pounds, which amount was procured in 21 days, making an average of two tons a day.

Wishing, before publishing the item, to be assured that it was something near the truth, we wrote Mrs. Pickard herself, and here is her reply, which came promptly:

RICHLAND CTR., Wis., Oct. 1, 1894.
GEORGE W. YORK & CO., Chicago, Ill.

Dear Sirs:—This clipping is worded almost exactly as I gave it to our home editor, and there need be no doubt about the truthfulness of the statement. Although this is a large amount of honey, it is nevertheless the truth.

Yours respectfully,

MRS. W. J. PICKARD.

P. S.—There is one statement which might be corrected, and that is, it ought to be 2,000 pounds instead of two tons per day.

MRS. W. J. P.

Certainly the words "Well done," can aptly be addressed to Mrs. Pickard, for her crop of honey is indeed something glorious in this year of drouth and unfavorable results in the majority of the apiaries of our land.

It would be interesting to know the number of colonies Mrs. Pickard had, and anything else about the matter that she may be good enough to tell us all.

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Rev. E. T. Abbott and Mr. O. L. Hershiser, President and Vice-President of the North American Bee-Keepers' Association the past year, we take the pleasure in



PRESIDENT ABBOTT.

showing by portraits on this page. *Gleanings* for Oct. 1st also contained a picture of Mr. Abbott, but as we had decided, before seeing *Gleanings*, to insert these two portraits this week, we have done so even at the risk of being thought to follow too closely in the footsteps of our worthy contemporary.

We presumed that our picture of Mr. Abbott was exactly as it should be, until we saw the one in *Gleanings*, which shows him slightly bearded. Not having seen him for a whole year, we are unable just now (Oct. 4th) to tell you which portrait is "up to date," but after the convention we will be qualified to speak intelligently upon this important (?) subject. At the risk of disagreeing with Bro. A.'s good wife, however, we will say that we think he's more handsome with simply a mustache—as shown in the picture herewith.

Rendering Beeswax.—B. Taylor, in the *Farm, Stock and Home*, says that he had some old brood-comb that had remained in a tank of water for some weeks,

and upon squeezing a handful of it lately, found the wax separated from the black comb easily. On testing some of it in the solar wax extractor he found that it yielded more than double the wax of comb not so treated. The comb seemed to have rotted, leaving the wax free. The easy and thorough rendering of wax is an important subject, and we hope others will investigate the matter and report their experience.

Nurse-Bees Eating Eggs.—Mr. S. E. Miller, in the *Progressive Bee-keeper*, says that he "has noticed some things that seem to indicate that nurse-bees eat eggs when rearing queens." He isn't *sure* about it, and would like to know whether any other observing bee-keeper has noticed anything of the kind.

Pollen as a Ferment.—We read that pollen is used by the French as a ferment for hydromel. Then some one asked, "Why doesn't some enterprising Yankee start the manufacture of yeast from pol-



VICE-PRES. HERSHISER.

len?" We'll guarantee that if it can be clearly shown that "there's millions in it," there will be plenty Yankees who would soon go into the pollen-yeast business.



**GENERAL
QUESTIONS**

ANSWERED BY

DR. C. C. MILLER,
MARENGO, ILL.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 20 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—ED.

Uniting Colonies for Winter.

What is the best method of uniting colonies for the purpose of reducing the number for winter? J. P. S.

Sunapee, N. H.

ANSWER.—You will find a good deal about this in the last few numbers of this journal. When bees are gathering honey there seems no trouble about uniting, but when forage is scarce there is more inclination to fighting. I think you will like the plan of putting one hive over the other with only room for a bee or two at a time to pass from one to the other.

Protection for Winter—Transferring.

1. Will a three-inch plank hive with tarred paper and rough boards tacked on the outside, six-inch super packed with chaff, and double bottom-boards with tarred paper between, be sufficient protection for outdoor wintering, where the mercury frequently hangs 30° to 40° below zero, and sometimes goes to 60° below, on a snap? If so, how wide should a $\frac{3}{4}$ -inch entrance be left?

2. Would it do to transfer bees on frames from board hives to plank hives (inside dimensions are the same) as late as the forepart of October, if we have a few warm days? M. N. B.

Sand Creek, Wis.

ANSWERS.—1. Your arrangements seem pretty good, only I don't believe you will like 3-inch plank for hives. It will add greatly to the weight as also to the expense, with no corresponding gain. $\frac{3}{4}$ lumber seems to be pretty well agreed on for all climates.

In a place where the temperature is cool enough to lower itself as much as 60° below, it hardly seems as if it would be safe to winter bees outside of a cellar, and it would be certainly well to try part in a cellar. Still, you can't always go by the thermometer. My bees are worse off out-doors with the thermometer 10° below and such fierce winds all day long as we sometimes have, than they would be in a much colder place with no wind stirring.

After all, there's nothing like experience in the matter of wintering bees. Cut and try. When you find a plan that succeeds best for you, that's the plan for you to stick to.

2. There will be no danger in changing the frames from one hive to another any day when warm enough so bees are flying. But look out that you don't get started so late in the day that the bees can't keep on the move for some little time after the change is made.

Wants Golden-Rod Described.

Please give a description of goldenrod; also state whether there is more than one variety. The so-called goldenrod here is of bushy top, yellow, compact flowers, about three to four feet high, and nothing but potato bugs work on it. Where can I procure the seed of the true goldenrod, such as the bees work on, or of any other plant that I could raise with profit for the bees?

I anxiously await the weekly appearance of the "Old Reliable." H. H. H. Hermon, Ill.

ANSWER.—The picture of a spray of goldenrod given herewith is one of the most common kinds. You will recognize



it from this picture better than from any description. Yet this is only one kind, and there are about 40 different kinds in the U. S. They vary from the widely-branching spray form to the solidly compact head. At this time of year

when you see a plant from one to four feet high, with very bright yellow flowers in clusters, you are pretty safe to guess it may be golden-rod. I suspect the kind you have is the genuine article. There is great diversity as to the matter of bees working on it. Some say it is a valuable honey-plant; others say it is not visited by the bees. In my locality I often find bees on it, but oftener not. I don't think I ever saw the Colorado potato beetle on it, but often the bluish beetle.

Supply dealers may furnish seed, but I doubt if you will find any golden-rod better than what you already have. If you have ground to fill with golden-rod, I advise you to try sweet clover.

Questions on Queens and Drones.

This is my first year with bees. I have 17 colonies. I bought 7 Italian queens from a Texas breeder, and introduced them Aug. 8th. On examination Aug. 19th, I found them all received and laying. I had removed and killed a black queen from each of the 7 colonies previous to introducing the Italian queens, which were 5 untested and 2 tested. On examination Aug. 22nd I found that the tested queens were missing, and one of them had queen-cells started; the other one none.

Four days after this I took a queen-cell from the one and engrafted it into the other. The day for the queens to hatch I found the one where the cells were reared was hatched, and the one engrafted destroyed, finding the comb filled with eggs. On close examination I found a black queen. I know that the Italian queen was laying when she was in there, for there is her brood to show for itself.

I have also exchanged Italian brood into some of my black colonies, after killing the queens, and they had sealed queen-cells in four days after I put it in there. Now from reading bee-books it seems that it takes the eggs three days to hatch and eight days to be sealed; also that they cannot rear a queen from an egg that had been laid more than three days when I exchanged the comb, and the four days after that would be seven days in sealing. I am young in the business, and would be glad to receive all the information I can get, so I will proceed to a few questions:

1. Will a colony receive a queen when it has one?
2. Why were my tested queens killed, and the untested ones not?

3. Are drones of any account, that are reared in worker-cells, as that is all I have in my apiary?

4. Will the bees seal a queen-cell under eight days? L. C. B.
Ivanhoe, Tex., Sept. 8.

ANSWERS.—1. I think not.

2. I don't know of any reason why the bees should discriminate, unless the tested queens had received treatment different from the others before introduction.

3. Opinions differ. I'd rather have full-sized ones. But I will venture the opinion that for once in your life you're mistaken as to having no drones. I think some one would have a paying job if you would give him a dollar apiece for every full-sized drone found in your apiary.

4. According to the books, I believe, the cell should be sealed about eight days after the egg is laid. I have some thought that there may be exceptions to this, from the small size of grubs I have sometimes found in sealed queen-cells.

If you will look again I think you will find that the books teach that bees do not usually rear a queen from a larva more than three days old—although in a strait they may do so—and not as you put it, "that they cannot rear a queen out of an egg that has been laid more than three days." They can rear a queen from a larva that is three days old, that is, three days after hatching from the egg, or six days after the laying of the egg. Now if they chose a larva three days old, or one whose egg had been laid six days, and you found the cell sealed four days later, that would be ten days from the laying of the egg; so there was nothing in the case to differ from the teaching of the books.

Mr. E. K. Terry, of Burlingame, Kans., President of a Kansas bee-association, called at our office on Sept. 29th. He was visiting a son who is a dentist in Chicago. Mr. Terry expected to attend the St. Joseph convention.

"The BEE JOURNAL is the best bee-paper, all around, that I ever saw. I have kept bees for 33 years, and would feel lost without them."—Dr. A. Puderbaugh, of Kansas, on Sept. 25, 1894.

"The valuable and interesting AMERICAN BEE JOURNAL is a welcome guest at my desk. Best wishes for its success."—W. A. Choate, of California, Sept. 16, 1894.

OUR DOCTOR'S HINTS.

BY F. L. PEIRO, M. D.

McVicker's Building, CHICAGO, ILL.

Asthma—Prevention and Treatment.

If I had an enemy, and I cordially hated him, I would, notwithstanding, pray for his deliverance from asthma! Only those who have suffered it—or have seen great suffering from it, as I have, can form any idea of its terrible character. Suddenly the sufferer is awakened out of comparative slumber, with a sense of suffocation, as if one's throat was grasped by a powerful hand, and the grip so tightened as to exclude respiration.

A feeling of oppression in the chest possesses him, his lips are blue, face an ashy color, eyes protruding, and every gasp is one of determined effort to obtain air—air to keep from choking to death!

If only the lungs would loosen, if that tight feeling under his breast-bone would relax! O if he could only expectorate, then, ah, then he would feel blissfully relieved! But there is the difficulty. Neither of these greatly desired results will take place unless, in some way, the troubles that occasion these symptoms are removed—at least temporarily. And what will the sufferer not do to obtain this surcease from so horrible oppression?

But before any treatment is considered, certain facts should be stated with a view to the prevention of these attacks.

He who knows himself a victim to this trying condition, termed Asthma, should remember how much depends upon himself for immunity from it. His diet at evening should be light. If experience has taught him that certain food is conducive to an attack, he should, of course, abstain from its use. He should wear light or heavy flannels, according to the seasons, to avoid the evil results of sudden changes in temperature. He had best keep out of the cold, damp night air; if compelled to be in it, he should protect himself by adequate clothing.

The treatment must be largely preventive. With this end in view, the brisk friction over the chest and back, night and morning, with a towel wrung out of cold water is excellent; but it must be rubbed hard, and the skin made red. If an attack is feared, a few drops of spirits of camphor dropped on a piece of sugar and taken, is likely to prevent serious trouble.

Or, if you have the remedies at hand, contained in the Family Medicine Case, advertised in the BEE JOURNAL, take the remedies there directed for Asthma, and good results will follow. If the feet are placed in hot water, with a handful of salt added, all the better.

But from abundant observation, I know of nothing so effective, not only as a pre-

ventive, but oftentimes a positive cure, as the inhalation of oxygen, prepared by the American Oxygen Co., of Chicago. Children and young people are often cured of asthma, and it is at these tender ages that greatest success attends proper treatment. At more mature time of life relief, more or less permanent, only can reasonably be expected.



CONDUCTED BY
MRS. JENNIE ATCHLEY,
BEEVILLE, TEXAS.

PROFITABLE BEE-KEEPING.

Lesson No. 11.

(Continued from page 334.)

HOW TO PREVENT SWARMING.

Now after I tell you how to keep your bees from swarming, and you think it is too much trouble, why then let them swarm. If you do not desire any more bees, or any more colonies, and you are bent on keeping down swarming at all hazards, cage your queens and let them remain caged in their hives until the brood all hatches out. Keep down all the cells for eight or ten days, or until they have no chance to start any more, and if you are determined to stop the swarming, you must not overlook a single cell. Then, when the brood is all hatched, turn loose the queens, and I will guarantee that your bees will not swarm naturally any more until they get sealed brood, and by that time your honey-flow or the swarming-fever will likely be over. But if they show signs of swarming, starting queen-cells, then cage again, and I will go you a nickel that they will be so reduced by the time you get through the second round that they will be content to stay at the old home for the rest of the season.

Now, this I know is a heap of trouble, but I give it as a remedy to prevent bees from swarming, and it will surely do it, for I have tried it, and when you put out a long grin, and doubt my remedy,

try it and be convinced. If you do not think I can walk into an apiary of 100 colonies, and in less than three days' work knock the swarming business in the head, give me a chance and I will convince you, unless I happen to miss some cells like you are apt to do. But that must come under the head of an exception, and not a rule.

Here is another good remedy. But first I will say where there is trouble there *must* of necessity be a cause, then remove the cause and a cure is easily affected. Well, the cause of swarming is sealed brood, sealed queen-cells, and sealed drone-cells. Now keep the sealed brood away until the swarming-fever is over, and no swarming will take place.

I wish you to understand that bees do not swarm naturally with unsealed brood, so the main cause of swarming is an abundance of sealed worker-brood, sealed drone-brood, and of course when this is the case they are in a prosperous condition, or they would not have the hive full of sealed brood. Then this is the cause—remove it, and a cure is effected.

You are heard to ask, "What will I do with that sealed brood?" Well, in large apiaries I have always found some weak colonies that can be built up and made equal in bees to the balance, and made ready for the honey-flow, but if such is not the case, put your sealed brood off into empty hives, protect from ants and sun, and leaving a few bees to care for it, is best. Do not let them rear a queen, and when the bees have all hatched out, take them and the empty combs they occupy, and put back with the old queen and old hive where they came from, removing all the brood as before. Put on the sections, get a crop of honey before they get another hive full of sealed brood, and let the bees know that you can beat them at their own game, and don't be one bit afraid of their swarming until they get a lot of sealed brood, for they won't do it if there are two bushels of them.

Now you may say all this is a heap of work and bother, which I will admit that it is, and I love to see my bees swarm too well to practice it much, but it is a remedy for swarming, just the same, and when I am determined to prevent a colony from swarming, I can do so by the above plans.

I have kept down swarming by keeping all the queen-cells torn down, by going through the hives once a week until the swarming season was over. I know that it has been reported that bees

do sometimes swarm without having queen-cells started at all, but it must be exceptions and not a rule when they do so. I never had a natural swarm to issue in all my 20 years of bee-keeping, without starting cells first, and seldom until one or more queen-cells were sealed; but I have a few times had swarms issue before any queen-cells were sealed. I am of the opinion that those who reported swarms without any queen-cells started at all, were not natural swarms, as I have often had pretty fair colonies swarm out on account of starvation and other causes, and also there would be a few young bees left in the hives, but they were only what we term "pauper swarms." It may be that Italian bees sometimes swarm without making any preparations, but it has never come under my observation.

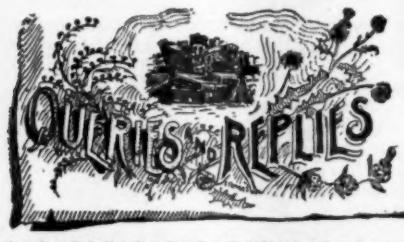
BEST PLAN OF INCREASE.

To close this swarming question, I will add that unless you have *all* the bees you can possibly handle and care for, I would allow them to swarm one time each, or divide them artificially, which means about the same thing in the South; for if you take away the largest part of the brood with the new colony, leaving the old queen on the old stand, and give empty frames, or frames of comb foundation, if done just at the proper time, it is as near natural swarming as anything I know of, and the proper time is just at the time they begin to prepare for natural swarming by starting queen-cells. I do not wish to be understood that the starting of what we call "stubs" of queen-cells in nooks and corners, etc., but when the cells have eggs in them, and the bees commence to build them out. Then take the brood, queen-cells, and all to a new stand, leave the old queen a frame or two of unsealed brood, and shake off some young bees on the old stand. The bees will then take care of and finish up those natural cells, and you have natural queens, and just as good as natural swarming. Of course only allow one cell to remain in the new colony, lest they cast a swarm—leave a nice large one. This is really my best plan of increase, as I have stated before, and one that will likely give satisfaction.

The next lesson will be different races of bees, queens, etc.

JENNIE ATCHLEY.
(To be continued.)

Have You Read the wonderful Premium offers on page 451?



Which Orders the Swarming?

Query 944.—When a colony swarms, which orders the "walk-out"—the queen or the workers?—Florida.

The workers.—J. H. LARRABEE.

The workers, no doubt.—R. L. TAYLOR.

Both. They work in unison.—P. H. ELWOOD.

I don't know. The workers, I think.—J. A. GREEN.

In prime swarms, the workers.—EUGENE SECOR.

Both, in harmony with Nature's laws.—G. M. DOOLITTLE.

Workers are "boss," and control the queen.—MRS. L. HARRISON.

The queen—for want of room to deposit her eggs.—E. FRANCE.

I doubt if there is any ordering about it. No order is needed. The queen is late in going.—A. J. COOK.

The workers, many of them, will be in the air before the queen makes her appearance.—S. I. FREEBORN.

It must be the queen that leads—not orders—for the simple fact that if she leads back, they go.—JAS. A. STONE.

Nature; but it seems there is occasionally internal dissensions, as the queen fails to go.—J. M. HAMBAUGH.

It would seem—the workers. But no doubt the "walk out" is ordered by "Nature's first law."—J. P. H. BROWN.

I suppose a little like it was in the late great railroad strike. The chief boss (queen) sort of "requests" the swarm to march forth.—C. H. DIBERN.

We think they are unanimous on that point. The queen is angry because young queens are reared, and the bees are uncomfortable for want of room.—DADANT & SON.

Neither of them. The economy of a bee-hive is not managed on the Debs plan. Each one has a mind to work the

best she knows how, and when the time comes for doing a thing, they all do it without any ordering. The workers generally go out first, however.—EMERSON T. ABBOTT.

Does any one know? I don't; and I don't see how one can ascertain. As a guess, I will say, there is probably a community of interest that governs the matter.—J. E. POND.

The workers. I have repeatedly seen them persecuting the queen and driving her out. When a queen cannot fly, the bees will endeavor to prevent her return to the hive.—M. MAHIN.

"I don't know;" but I think there is usually an understanding between bees and queen. Possibly the bees create the emergency, and the queen gives the "signal."—W. M. BARNUM.

With a normal first swarm the queen is among the last to leave the hive; while with after-swarms with virgin queens, the queen is about the first one to leave the hive.—MRS. J. N. HEATER.

I suppose both must work together to get things in shape for swarming. I suspect the immediate instigators are the workers, as I have known a swarm to issue with no queen in the hive, having been removed a short time before.—C. C. MILLER.

I never have yet been fortunate enough to hear the orders given, but I have often seen bees make a rush, and I believe Nature has taught the whole business—queen and workers—to move out when the proper time comes. I do not think there are any orders at all, but the bees sometimes seem about half way mad at their queen at swarming-time.—MRS. JENNIE ATCHLEY.

The worker-bees control the whole proceeding. This very season I was watching for the queen at the entrance of a hive where the bees were in the act of swarming, and the queen did not make her appearance until $\frac{1}{4}$ of the swarm was in the air, and when she did appear, she was being hustled out by force of arms. I distinctly saw an irate worker bite her as she sullenly "vacated." I once had a swarm to issue while I had the hive open, and saw the internal excitement, and I saw the queen make repeated attacks on a sealed queen-cell, but the guards stood firmly, and even used force to drive her away. The old idea that the queen "leads out the swarm" looks romantic, and all that, but it is not according to solid facts.—G. W. DEMAREE.



TO SEPARATOR, OR NOT TO SEPARATOR?

BY G. M. DOOLITTLE.

A correspondent writes, saying: "A party writes me that just as nice comb honey can be secured without separators as can be with their use. Is this so? I am about to prepare for another season this fall, and if separators are not necessary in producing comb honey, I wish to know it in time so I can make my preparations accordingly. Please reply through the AMERICAN BEE JOURNAL, as your answer will doubtless be interesting to others besides myself."

This question of separators or no separators is something which must come up for the decision of each one. None can decide the matter for another. Many have claimed during the past that separators were useless, and wishing not to appear wedded to my fixtures, I have tried dispensing with them in a part of my apiary, and actually found that I could, by taking great precaution, as to the hive being level, the foundation fastened to the sides and top of the sections securely, and by giving just the right amount of room, so that the bees would commence in all at once, get combs built true enough to crate, especially if care was taken in crating, so that the "fat" side of one section was placed next to the "lean" side of the one next to it; but when it came to the glassing of them, that was out of the question. To be sure, most markets do not desire glass on the honey; but as a few do, it makes it very handy to have our honey so we can glass it if we wish.

While, as I said, I had succeeded by using much precaution in getting a fair job done without separators, yet I found that this same precaution cost me more than the separators, and that, unless I used this precaution, the loss by bulged and unevenly filled sections was still greater than the first. So I found that there was nothing gained in trying to dispense with separators, but, on the contrary, such a trial would be very likely to result in a loss, owing to the nicety of the work required.

Again, I found that I must leave the case of sections on the hive until finished, before they were disturbed, for if I added more room, except by way of a full case, on the tiering-up plan, I was sure of getting the combs so badly bulged that I could do nothing with them, save to sell them as "chunk honey." This spoiled one of the best ideas I know of in bee-keeping, namely, the putting on of a small amount of surplus room at first, and gradually increasing it as the bees become strong, until the full capacity of the hive was reached. I am satisfied that this one idea has much to do with successful honey-production. So if I dispensed with separators, I lost quite a share of my success also, and all because some were prophesying and saying that "separators were fast becoming things of the past."

Once more: I could not take my sections off once every week to ten days, as I had formerly done, while the combs had a snowy whiteness, which always gives

honey a good name in market, but I must leave them on the hive until the nice white comb was more or less travel-stained by the bees, for as sure as I took a comb out and put an empty section in its place, the combs in the sections next to it would have their cells so lengthened that they could not be crated at all.

Then each section must be filled with foundation, if I would succeed, no matter how short I was of cash to purchase it. To be sure, I did succeed tolerably well by putting strips of foundation two inches wide in the two outside tiers of sections; then $1\frac{1}{2}$ inches wide in the next two tiers inside of them, then one inch wide next; and in the center two tiers, foundation only $\frac{1}{2}$ inch wide; but all this required a nicety that was much greater than the use of separators demanded.

From the above it will be seen that I have given the non-separator business a fair trial, and was at last driven to the conclusion that, for me, separators are an actual necessity, if I would secure the most comb honey in the best marketable shape.

Not long ago I ran across the question asked in one of the bee-papers of the past, "Will all bee-keepers agree that it is more profitable to dispense with them (separators) than to keep them?" to which one of our noted writers replied: "It is not at all likely that all bee-keepers will, as some are so wedded to their fixtures and methods that it would be almost impossible to induce them to even try some better method;" and yet, if I am correctly informed, that noted writer has left that "better method" (non-separators) and gone back to using separators again. It is well, as a general thing, to know that a certain thing which we may advocate, is a "better method" before we herald it broadcast before the world, for by this heralding we may induce others to go to a great expense in changing their fixtures, only to be disappointed in the end.

Some have thought that separators cost them considerable of their crop of honey; but from careful observations during the past twenty years, I fail to find anything pointing toward such a conclusion. The only thing that I can see against separators is their original cost, and the time consumed in attaching them to the super or wide-frames, and I believe that the advocating of the production of comb honey without their use, is a move in the wrong direction, and I hope that all will take an interest in seeing that good prices in our markets can be maintained only by putting upon it that which is as nearly perfect as possible.

Borodino, N. Y.



THE "NEW BEE-DISEASE" INVESTIGATED.

BY WM. R. HOWARD, M. D.

Having noticed on page 344, in the report of the Los Angeles County convention, by Dr. G. A. Millard, under the caption "A New Bee-Disease," that they are having some trouble in California from this new infection (?), I wish to call the attention of those interested to page 14 (my work on "Foul Brood"), commencing at the last paragraph on the page, where the condition is treated in full.

We have been troubled with this condition in this county, and have lost several colonies of bees from it. The treatment mentioned in connection with this condition, where rigidly carried out, has not failed to cure it. During the profuse honey-flow it frequently disappears, from the fact that the bees clean out the dead brood and fill the infected cells with honey. Later in the season, or perhaps the next spring, when the honey has been removed, and the cells have been used again for brood, the disease reappears. In all the cases which I have examined, I have found that the most of the dead brood was sealed. Many putrefactive bacteria increase

rapidly when exposed to the air, and when the air is shut out, as by sealing the brood-cells, they are deprived of the oxygen necessary to their growth; and fermentation obtains, thus destroying the sealed pupa.

A familiar illustration is noticed in the souring of milk, or cream; while the cream is exposed to the air, or frequently stirred to admit the oxygen from the atmosphere, souring is hindered. The chemical change is the result of the growth of a microscopic organism of the same origin as yeast, and like common yeast, requires oxygen for its development—this it gathers from the air, if the latter have access; but in the absence of air, as when growing in milk, or in the "yeast batter" of the baker, decomposition of the milk (its sugar) and lactic acid obtains. When the "batter" of the baker is made into dough, the oxygen is excluded, and decomposition takes place, and fermentation is the result, and the bread is said to "rise;" stirring or agitation causes it to "fall."

I mention this familiar illustration so that it may be made plain how fermentation is produced, and to show how this process may be destructive to animal life.

I have had this "new disease" (?) under consideration during the present season, and out of several careful examinations I have not found a single specimen of *bacillus alvei*; I have it still in my laboratory, under culture and investigation, and may arrive at something definite, which may be of interest to bee-keepers. I will give the readers of the AMERICAN BEE JOURNAL the results of my investigations. This is possibly McEvoy's "foul brood" from rotten brood. A careful reading of Proposition II, in my work on "Foul Brood," will give a clear understanding of this disease.

Ft. Worth, Tex.



SOME OF THE PAST SEASON'S "KINKS."

BY F. L. THOMPSON.

WEAK COLONIES AND NUCLEI.—I had a weak colony last spring. By the time the honey-flow came, they had but two frames of brood, and barely enough bees to cover them. I did not want to spread the brood, and so placed a dry comb next to it, and moved the honey-combs back (which had been filled with feed honey by other colonies), thinking that now they would develop. Instead of that, they promptly plugged up every cell of it with new honey. Then I moved that back and put in an empty frame with a starter. This they built out and filled mostly with brood, and subsequent frames in like manner, until they became strong enough to swarm. Query: What would have happened if I had let them alone? Wanted: An article on all the "kinks" in developing nuclei and weak colonies after the flow has begun. Is not a large proportion of an apiary run on the let-alone plan, all weak swarms saved, etc., apt to become honey-bound?

LATE OR EARLY BREEDING.—One ten-frame colony did not begin to breed until after April 1st—I forget just when. In a very short time it had four frames of brood, and when the honey-flow began it had eight, and not long after cast a strong swarm. Bees here usually begin very early, and increase gradually. It is still an unsettled question when breeding should begin. It depends upon locality, of course; but are there not some absolute principles about it? The weight of authority seems to be in favor of late breeding, if the old bees are not too near their end.

ANOINTING FRAME EDGES.—Having a number of new combs to be built this year, I anointed the edges of some 50 closed-end frames with an inferior quality of machine oil. (Not patient enough to wait to get vaseline.) It was a particular job to keep such stuff from spreading too much, and it did not smell very nice. But the

bees did not object (I did not use such frames on swarms), and the frames handled beautifully. There is now a very little propolis along their edges. How would it do to apply vaseline to the board designed for end-bars before it is sawed up?

SWARMS—HIGH-FLIERS AND LOW-FLIERS.—An old bee-keeper told me that when a swarm on the march is observed to be flying low, it is pretty sure to stop within half a mile or so, while if it flies high there is no use in following it.

WET BEE-BRUSH.—He also told me, and I proved by experience, of the advantages of keeping a bee-brush wet when in use. This has been given before in *Gleanings*, but it pays to bring up such matters periodically. A wet brush is more effectual, irritates the bees less, and does not get sticky with honey.

ABSCONDING—PECULIAR CASE.—The same man once had a peculiar case of an absconding swarm. It was found to be queenless shortly after being hived, and he gave it a frame of brood. It stayed until a number of queen-cells were sealed, when it suddenly left bodily, and went half a mile to a neighbor's yard, clustered on a tree for half an hour, then returned to the hive it had just left, and stayed there.

A SWARMING-TIME POLE.—When there are tall trees about the apiary, a handy and simple tool in swarming-time is a long, light pole with a hook on the end. With this, light branches can be entirely torn off with a single pull, if it is applied at just the right place; the boughs may be shaken with it to prevent the swarm from clustering again, and spots inaccessible from the ground may be reached from the middle of the tree. But clipped queens are nicer.

AN IMPROVED SUPER.—I have tried several of Atkin Bros. & Knight's supers. For keeping the sections absolutely clean, they are very superior. They are intended to be used in connection with wood-zinc honey-boards. Some of the sections went from the super to the crate untouched by the knife; and none required any but a very little scraping. This super uses separators between every two rows instead of between every one, though more can be used if desired. That seems a good idea. The honey is straight enough to crate; in fact, it rarely bulges too much on the side opposite the separator, when there is but one more comb between it and the next separator; and the sections are nearer full weight.

WHO CAN ANSWER?—Why don't we ever hear from the Vermont and Nebraska experiment stations?

FOREIGN BEE-PAPERS.—Those who can do so will do well to read the foreign bee-papers, especially *L'Apicoltore*. They may not have many ideas that we can assimilate without digesting first; their methods and hives are different from ours. But they are suggestive.

AN EXPERIMENT.—Here is a desirable experiment: Find the average temperature of the upper corners of the comb-spacers in a number of colonies in closed-end frames during a freezing spell in winter, and compare it with the average temperature of the same in the same number of colonies of the same strength on open-end frames at the same time. It will not do to get the temperature of the center of the cluster; for the inside bees of colonies on open-end frames are doubtless just as warm as the inside bees of colonies on closed-end frames; but if there is any difference, the crust of inert bees on the outside of the cluster when closed-end frames are used ought to be less thick than on open-end frames; the vitality of the colony will not be so soon expended, and more brood will be reared in spring.

EXTRACTING AT NIGHT.—Those with a limited amount of extracting to do after the flow, when robbers are plenty and honey thick, need not spend money for a honey-house, or go into the house and daub the floors up. Extract out in the yard at night. A piece of wire-screen over a strong colony, and the extracting chamber cleared of bees, set over it and covered up on the previous morning, will keep the combs warm until wanted. When a set of frames is finished, it can be at once returned to the bees for cleaning up with little disturbance, leaving the tiering, if any, until next day. Extracting by moonlight, with the crickets singing about you, and an occasional croaking of frogs in the distance, is lovely. The honey will be cooled by the sides of the extractor; but if you cover up the receiving vessel and leave it in the yard next day to warm up in the sun, the honey may be strained without difficulty as soon as the bees stop flying.

Arvada, Colo.



THE BEST HIVE FOR WINTERING.

BY J. W. PETERSON.

As there seems to be a great deal now being said through the different bee-papers on the subjects of large *vs.* small hives, wintering, etc., I beg leave to briefly say a few words concerning my experience and observation.

I fully agree with Mr. Bender (see September *Nebraska Bee-Keeper*), viz.: that bees winter and spring much better in a deep hive than a shallow one. This is a fact that I think is acknowledged by the majority of our prominent bee-keepers of to-day. I further think that better results can be obtained, take it the year round, with a frame deeper and shorter than the Langstroth, than with any frame as shallow as the Langstroth.

I have used the American hive, and found that my bees came through the winter without loss, and in splendid condition, while those of my neighbors who used the Langstroth hive, wintered poorly, and their loss by spring dwindling was greater than mine. The weather here in the spring is so cold and changeable, that it is really harder on the bees than the winter is, consequently there is a great deal of dwindling. I do not think, however, that this is just to the hive, as the frames are a little too deep for easy handling, also the brood-chamber somewhat deep for producing comb honey, especially in the supers; and I do not like the idea of using any part of the brood-chamber for surplus honey, either comb or extracted.

I think a frame 13 $\frac{1}{2}$ inches long by 10 or 10 $\frac{1}{2}$ deep, about right for an all-purpose hive, at least I shall give it a fair trial. I also notice that some of my friends who have been opposed to a deep frame, are thinking of trying a deeper one than they are now using. I have never had any experience with the Heddon or any hive so shallow as that, but I think with proper management it would be a good hive for comb honey, but not for wintering, unless the frames be tiered up so that it would make a deep hive; and even then, it seems to me, it is longer than would be advisable.

I know some will say that a hive for successful wintering and springing is not all that we are after. We are after the best results in the production of honey (large yields, etc.) But I would like to ask them how they can expect to get the largest yields of honey without having their bees winter and spring in the best possible condition, and be strong and healthy for the commencement of the honey-flow (if there be one).

I favor out-door wintering, every time. It is true, the bees may require a greater supply of stores than when wintered in the cellar, but then I think it gives so much

better satisfaction, that it more than pays for the extra stores consumed. We find a man occasionally who says he winters his bees on the summer stands without any protection—not even a cushion over the frames; but I prefer to winter them on the summer stands with an outside case, packed with chaff, and a chaff cushion over the frames. Bees wintered in this way, having proper care the previous fall, have, in my experience and observation, been no other than satisfactory.

As has already been said, what would be a good practice in one part of the country would not be good in another; and I will further say, that a method successful with one might not be with another.

This subject of hives, in my estimation, is a very important one, as our success largely depends on a good hive; and it behooves us to use the best that can be obtained for the particular locality in which we live; also that we may have our frames of a uniform size, so that there may be no call for altering and fitting frames.

Of course, some who are acquainted with my not very ripe age (as I have but few gray hairs) and short experience, will undoubtedly say: "O he is only a young fellow with but little experience, and his views are not to be compared with older heads in the business!" Or, perhaps some may say, as they have of Ben There, "Young man, that's all right for a tenderfoot." But have we younger members of the craft not a right to express our ideas, as well as the older ones? Some one, however, may convert us to using such hives, and to thinking as they do.

Omaha, Nebr.



ONE-POUND OR TWO-POUND SECTIONS.

BY CHAS. DADANT.

The query was lately in the AMERICAN BEE JOURNAL: "Which colony will store the more surplus honey, the one provided with one-pound sections, or the one having two-pound sections?"

The answers to this query were almost unanimously in favor of the two-pound sections, although everybody agreed that when it came to selling the honey, it was much better to have it in one-pound sections.

To the farmer who keeps but a few colonies, and who wishes to produce honey, especially for his private family use, the question of sale is but secondary, and he desires, above all things, to get as much product as possible from the few colonies of bees that he keeps. It is, therefore, important for him to know whether there is really an advantage in using large honey-sections. It is my intention, in this article, to explain why bees prefer large receptacles.

Bees, in a state of nature, lodge themselves in the hollow of trees, principally. They store honey in provision of future needs, especially for food during the cold season. Their instinct leads them to place the honey at the upper part of their hive above the brood, and far from the entrance, so that the cluster of bees being placed between their stores and the entrance, they can better defend these against intruders. They also want the honey in a place easily accessible during cold weather, and therefore as near the brood-nest as possible.

When we give our bees an empty box above their breeding-room, we act according to their requirements, but when the box is cut up into small compartments they readily perceive that some parts of this surplus room may become of difficult access to them during the cold weather, and they work in them much more reluctantly.

The first step taken for the securing of surplus honey, after the invention of the movable-frame hive, was the invention of a small box, glassed on four sides, and holding about four pounds of honey. The bees had access to this small box

through only one hole about an inch in diameter. It was soon perceived that there was less honey harvested in this style of box than formerly in the old wooden bucket plan, laid bottom side up on top of the box-hive.

We used these boxes for a short time, but after the invention of the extractor in 1867, we tried surplus cases of full size with open frames right over the brood-combs, and without any partition or honey-board. These frames were used for extracting. The result was so much in favor of the large frames that we soon discarded the glass boxes altogether.

A little later on, the honey-section, holding about a pound, was invented, and found just the thing for the comb-honey market. We tried these sections, in broad frames to hold them in the supers, and we used them side by side with the long extracting frames. The result was by far in favor of the latter, and were it not that the city trade demands honey in small packages, we dare the assertion that no one would think of using anything else.

To show how evidently the bees prefer a long, open frame to a small section, we will say that we tried both the long frames and the frames containing four sections each, side by side in hives, placing the small sections in the center over the brood-nest. In every instance, the bees filled the large open frames first, although they were placed in a less favorable place. In some instances they even sealed the honey in the open frames on both sides before filling the center sections. In a comparative test between large and small sections, the result was similar, although the difference was not so plainly marked.

This shows without doubt that it is best to use long open frames, or large sections, in the supers, when the intention of the bee-keeper is to produce honey especially or exclusively for his family's use. But, if honey for market is wanted, one must either use the one-pound sections which are the only comb-honey package of marketable value, or he must use the long, open frames with the honey-extractor.—*Prairie Farmer.*

Hamilton, Ill.



VARIOUS NOTES AND COMMENTS.

BY DR. C. C. MILLER.

BEE-FIELD COMPETITION.—I'm quite interested in reading Mrs. Atchley's experience in the matter of correspondence. Incidentally a point comes up upon which she is silent, perhaps from modesty, but it would be greater kindness to all to talk right out. She is asked about matters at Beeville, and it is not hard to read between the lines that Mrs. Atchley has in substance said, "Yes, it might be a good thing for you to settle down at Beeville; come and look the ground over for yourself, and I'll help you all I can." That idea, "What one woman has done, another can do," is sometimes quite a "booster," and sometimes it's a bare-faced fraud. No other woman in all the world can do what Mrs. Atchley has done, unless Mrs. Atchley gets out of the way. That is, no one can sit down beside her and have as free a field as Mrs. Atchley now has.

Now if there is twice as much pasturage as Mrs. Atchley's bees can ever be expected to use, then it's all right to encourage others to occupy the ground. But in general it's better to say plainly, "The chance on this field is not as good as it was when I came here, for then it was unoccupied, and now there is no more pasturage than my bees can use, and if more bees are brought, it will not only be just so much taken from my bees, but it will not give your bees so good a chance as if you find an unoccupied field."

I can hardly think of a greater absurdity in the line of selecting a location than

for a man to settle down close beside an established bee-keeper who has one or more out-apiaries. For if there is room for the bees of a new-comer, the man is a fool not to occupy it with his own bees instead of taking them to an out-apairy.

PLANTING FOR HONEY.—The replies on page 399 are not very encouraging to any one who thinks of planting for honey alone. Hope in that direction has, I think, pretty much died out. And there was at one time a good deal of it. I well remember some years ago Prof. Cook's mildly reproachful protest against my saying anything to discourage attempts in that direction, and it is well known that he experimented quite largely. Now his brief reply, "Not any," shows that he has gone over to the majority.

It is true, white clover and alfalfa are each mentioned once as proper to sow for honey alone, but it seems to me there are few places where it would pay to sow white clover and let it stand year after year without cutting or pasturing with any thing but bees.

Four of the repliers show still a lingering belief in sweet clover as a profitable thing to plant for honey alone. In some places, and on some kinds of soils, it may be. But if there is any future for sweet clover—and it is quite possible there may be—it is because of the fact that it is useful aside from its use as a honey-plant. On this account I'm glad to see the article from M. M. Baldridge, page 401.

In addition to what he has said, I think it worth while to mention another point. It is very desirable to cut sweet clover *early*. This for more than one reason. If left until in bloom, or even if only budded for bloom, there will be too large a quantity of coarse, heavy stalks that will not be eaten. Another reason for early cutting is, that after early cutting it will branch out and give a lot of splendid pastureage for the bees after white clover is out of the way. I think it would be better to cut it before it attains its full height, when there is no sign of blossom buds.

Friend Baldridge has had probably more experience with sweet clover than I, yet on one point I'm a little skeptical. He says, "I should prefer to cover the seed by harrowing lightly." One spring I had some covered that way—sowed with oats. It made a good stand, but the following winter killed every plant. I don't know how deep it could be covered without hindering its coming up at all, but if that seed had been covered six inches—providing it had come at all—I don't believe it would have heaved the following winter. Or, if the ground had been hard, the result might have been different. But shallow sowing on mellow ground was certainly a failure that time.

SPREADING OF BROOD.—Dr. Brown's words, on page 401, suggest the idea that it would be well to have a standing rule, "No one should spread brood till he has had a long experience." And after he has had an extended experience he'll not do such a great deal at spreading brood.

A "KINKY" FRAUD.—That man F. L. Thompson, that writes on page 402, is a fraud. Yes, a fraud of the first water. Any man who can handle a subject as he has done, and give it in such style that one reads it with pleasure even if not interested in the topic, and then keeps back from view the "kinks" that are rattling around in his brain—I say a man who thus keeps back his fair share of contributions is defrauding us out of our just rights. But if he's ready to "shell out" in reasonable season, I'll take it all back and apologize* for calling names.

CELLARS AND CISTERNS.—Look here, Dr. Peiro, I'm quite willing to make my cellar blue with burning brimstone, but I just won't build any root-house. I'll

promise you to keep all decaying stuff out of the cellar, and I think I can keep it fit to live over, or even in, and I want pure air in it for my bees. I'm strongly inclined to the belief that bees don't winter so well in cellars as in mild winters out-doors, just because the nasty rotting stuff down cellar makes the air unfit to breathe.

You leave me in rather bad shape in another direction. One of the cisterns to our house has water fit to drink, and the other doesn't smell good, and isn't used. Now if you insist on it, I might burn down the house and build another at some distance—that would give a chance to have a later style of paper on the walls—but then the new cistern in the new place would get to having the same smell, and then another conflagration would be necessary. Now if you'll just tell us how to make that cistern sweet—it was cleaned out only a little while ago—if it's anything within reason, I'll try to take the medicine like a little man. Marengo, Ill.

[*Say, Doctor, don't you think you'd better offer an apology instanter, and with out any "kinks" about it, after reading pages 465 and 466? We believe you ought to, and do it as meekly as you can.—EDITOR.]



SOME PERSONAL BEE-EXPERIENCES.

BY EDWIN BEVINS.

A few years ago the writer thought he would like to have some bees. I had never had anything to do with bees except to shy away from them for fear of getting stung. I had seen other folks have bees—some in sections of hollow logs, and some in box-hives with holes in the top, over which in summer was placed a smaller box or "cap," inside of which was a many-cornered piece of glass covering a circular hole. I had never read any bee-book or bee-papers, but was taking some agricultural papers, some of which had a bee-department. One of the writers for one of these departments said that a beginner should begin with one colony, and increase his colonies with his increase of knowledge and experience.

This writer, or some other, recommended the use of the dovetailed hive; so looking over a stray copy of the AMERICAN BEE JOURNAL, which I happened to have at that time, for the advertisement of the nearest supply dealer, I sent to him, a distance of 200 miles or so, for a dovetailed hive. It came, and had on it something which I afterwards found was called a super, which was filled with something I did not know at the time were called sections. This hive, super, sections and all, I took just before swarming-time to a neighbor, and engaged with him for a dollar to hive an early swarm for me. The swarm I left with this neighbor until fall. When taken home the hive was found to be entirely filled with honey—brood-chamber, sections and all, with lots of bridges and brace-bombs intermixed, though I did not know at that time by what names to call them.

That same fall I came into possession of some more colonies of black bees, which were in log hives. These came through the winter succeeding all right, but my bees in the dovetailed hive died before spring.

I wish here to record my opinion, parenthetically, that the bee-department in the agricultural paper is not altogether indispensable to the modern bee-keeper.

When apple-bloom came, I tried my hand at transferring the bees in the log hives to dovetailed hives, and was reasonably successful. The winter previous I had procured some more dovetailed hives, this time not sending so far for them, but when they came to hand I found to my surprise and disgust that they were not like the first one. In other words, I found that there were dovetailed hives and dove-tailed hives. The first had what I found by reference to the catalogues were called

Tins in the supers; the others I found in the same way had pattern slats, and besides, the first hive was not quite so wide as the others.

I began to question the need and the economy of sending away for hives at all. The dovetailing didn't seem altogether necessary, nor the grooved cleats, nor the $\frac{3}{8}$ -inch strips between hive and bottom-board. These cleats might be made a little heavier, without any grooves, and nailed to the underside of the bottom-board and cover. The sides and ends of the hive-body might be made $\frac{1}{2}$ inch wider, and have an entrance cut in one end, and the hive could just as well stand on a smooth bottom-board as on any intervening strips. Some long, slender wire nails with flat heads would hold the corner together with sufficient firmness; if not, some strips of tin tacked around the corners would assist in holding them tight. I made some hive-bodies, bottoms and covers on this plan, and I am so well pleased with them, and the saving in cost, that my dovetailed hives will henceforth have to get along without any "tails."

Some of the winter leisure which hangs so heavy on the hands of some bee-writers can be put in as above indicated.

While I was working along with the dovetailed hive and its possible supplanter, it occurred to me that possibly the bee-department in the agricultural papers was not doing its whole duty; so I bought a copy of Dadant's revision of Langstroth's work on the honey-bee to help it out. This work I read with all the eagerness and interest of a boy who comes in possession of a Waverly novel. But I had not read long until I discovered that the work I had been doing was wrong—all wrong, and altogether wrong. The Dadant idea of bee-keeping seems to be big colonies of Italians in big hives, and extracted honey and—little work. They tell the beginner to begin with these big hives, and assure him that he can produce twice as much of extracted honey as he can of comb honey, and that it will sell for about two-thirds the price of comb honey.

Well, I thought I wanted some of these big hives, and the consequent easy time in hot weather. But where could I get the hives? Dadant did not offer any for sale, and nobody else made any that I knew of, so with the description contained in the book before me, I set to work to make one. I got along nicely until I had one completed—almost—but then my comprehension failed and I had to send to Dadant for a sample hive. Since then I have made several of them, and have the big colonies in some.

But about this time, when I had made up my mind to have more of these big colonies in more of these big hives, and produce lots of extracted honey, and have a good, easy time, the bee-papers began to get numerous about the house, and every paper had something to say about adulteration. Its terrible spectre stood between me and my vision of honey and happiness. I scanned the papers for the market quotations for extracted honey, and they were not encouraging. I would go slow in the matter of increasing the number of those big hives. The Dadants were luring me to my ruin. I would resume the use of some of those little hives, and produce some comb honey. I had only just got settled down to this idea when up sprung that infernal discussion in the bee-papers about sugar-honey. Here I was up another stump! If every other fellow was going to set his bees to making honey out of granulated sugar, what was a fellow to do who let his bees get their honey in the old-fashioned way? The sugar feeding might go on from early spring to early winter, and perhaps the year round, while the nectar-gathering bees had only a few weeks in which to labor! What could they do against such competition? Happily, the handle of this discussion got so hot that the fellows who had the firmest grip of

it had to let go, and the whole thing fell to the ground with a shudder-producing thud.

Dr. Miller, I believe, lately told one of his questioners that it is a matter of course that no honest person will feed sugar syrup to his bees with the design of having it stored in the sections and sold for honey. Well, it is a satisfaction to know that it is sometimes easy for a man to call a spade a spade, though at other times he may find it expedient to write an article of less or greater length in order to avoid saying anything about it.

But to return. When the clamor was all over, and a general hush fell upon the apicultural world, I found myself in possession of some colonies in the little hives, and some in the big ones—and I am not sorry. I shall work that way the rest of my apicultural life. I shall work for honey and some other things connected with the pursuit that have no market value, and let the money part of it take care of itself. Strong colonies of Italians in the home apiary, large enough for the home field, and worked for comb honey and increase of colonies, which apiarists say you are sure to have, and these big natural swarms lived in the big Dadant hives and sent to the out-apriary—why will not work along this line give as good returns with as little labor as any other, to the man who would devote all his time to bee-keeping? To the man who will work along this line unremittingly from year to year, there is much honey, considerable money, and some indescribable things that are pleasant besides. I appeal to Dr. Miller and to Mr. Doolittle, and to all the old veterans, and to some who are not veterans, to say if there are not many things about this pursuit which they would not sell for cash if they could. Into this inviting field of apiculture I may never enter far. The shadows are falling around me, and with a sigh I surrender to the conviction that I never shall do much of what I love to do so well.

Leon, Iowa.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Best Year He Ever Saw.

I put out my bees on April 18, 1894. I had 7 colonies, spring count, but sold one, which left 6 in good condition. I lost the queen of colony No. 5, and they reared another and did not swarm till August, when I hived them back.

I lost the first swarm of the season, which came out on June 22nd, at the first appearance of white clover. I increased to 13 colonies, and got 50 pounds to the colony—286 pounds of comb honey and 364 of extracted.

Mr. Griffin spoke of Mr. Tarr some time ago. I for one should like to hear from him.

The AMERICAN BEE JOURNAL is a welcome weekly visitor, and I have learned many a good lesson from its columns. May success always attend it.

F. M. POLAND.

Freedom, Me., Sept. 20.

Very Tedious Work.

I have 19 colonies of bees, and no honey to sell this fall. I was well prepared for it, too. It was too dry this summer—no white clover—all burned up. I think it was Solomon who said, "Hope deferred maketh the heart sick." Well, I am not sick yet, but really it is very tedious getting ready year after year, and then be disappointed.

JOSEPH MASON.

Wallace, Ill., Sept. 4.

Fairly Good Season for Honey.

The season here has been fairly good for the production of honey. A continuous rain during fruit-bloom prevented

the bees getting much honey from that source, and white clover yielded but little surplus, but we had a good ten days' run on basswood—the weather being so hot that it only lasted that length of time—and the buckwheat yielded more than I have known it to do before in many years. The swarming fever was simply immense during the white clover bloom, and made us no little trouble in trying to keep our colonies in such condition as we wanted them for obtaining surplus. Twenty-two colonies, spring count, increased to 35, and gave 2,600 pounds of extracted honey, with abundant stores left for winter.

DAVID HALL.

Warsaw, N. Y., Sept. 24.

A Simple Bee-Feeder.

Of all the feeders that I know of, the Hill bee-feeder is the best for me, but I object to having the feeder so arranged that it gives a chance for the bees to fly up into one's face when refilling. To overcome this I have made a $3 \times 3 \times \frac{1}{2}$ inch rim over what I would call a bee-excluder. The wood rim is simply covered with screen-wire. I place the bee-excluder over the hole in the honey-board or oil-cloth which covers the brood-frames, and make a Hill feeder out of a pint Mason fruit-jar, by breaking the porcelain bottom out of the cover, then puncture the cover with a scratch-awl, and I have a feeder that is practical, cheap, and with proper care it will last a lifetime.

The feeder is to be placed over the bee-excluder, and the bees have to reach through the excluder to get at the feed, but that does not delay them. I am writing from experience.

AUGUST BARTZ.

Chippewa Falls, Wis.

Finding Their Own Hive-Entrance.

I want to tell Mr. Taylor (see page 313) that the winter problem has never been a problem with me, and his plan so nearly resembles mine that I think I can answer his question.

I always winter my bees successfully out-doors, and think they can be so wintered in any place where it is profitable to keep bees. To give full details would take up too much space. If Mr. F. will begin at the approach of cold weather to move his hives together about six inches each day (provided it is flying weather), until they are close together, facing the south, with the front $\frac{1}{2}$ inch below level,

place boards along the back and ends of the rows, to extend about two inches above the brood-chamber, about one inch from the hives, and fill the space with sawdust, chaff, dry leaves or fine shavings; rip off the sealed cover, place over the frames a piece of burlap, put on a super and fill it up to within an inch or two of the cover with sawdust or chaff, protect all from the rain and snow, his bees will find their own homes, and he will have but little loss. I have always from my first experience with bees, followed this plan with entire satisfaction.

I have taken more than 100 pounds of nice comb honey per colony, spring count, from my bees this summer, besides increasing from 55 to 80 colonies, and could have done better had I not tired entirely out; being alone, and 60 years old, I soon tired out.

I don't like Dr. Miller's tree or post to shade the entrance of the hive, and although I admire the man very much, I am afraid to tell him I don't like it.

J. S. SCOTT.

Springville, Utah, Sept. 22.

[We are very certain you need not fear to disagree with Dr. Miller. He will think more of you for having spoken out in the plain way you have done. All true men are always open to kindly and well-meaning criticism. Dr. Miller is no exception in that regard.—EDITOR.]

CONVENTION DIRECTORY.

Time and place of meeting.

1894.
Nov. 13, 14.—Illinois State, at Springfield, Ill.
Jas. A. Stone, Sec., Bradfordton, Ill.
1895.
Jan. 28.—Venango Co., at Franklin, Pa.
C. S. Pizer, Sec., Franklin, Pa.
Feb. 8, 9.—Wisconsin, at Madison, Wis.
J. W. Vance, Cor. Sec., Madison, Wis.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRES.—Emerson T. Abbott....St. Joseph, Mo.
VICE-PRES.—O. L. Hershiser....Buffalo, N. Y.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York...Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.
147 South Western Avenue.